Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-11. (Canceled)

12. (New) Magnetic device successively comprising

a first electrode,

a magnetic tunnel junction successively comprising a first magnetic layer forming a reference layer and having a fixed magnetization, an electrically insulating layer forming a tunnel barrier and a second magnetic layer forming a storage layer and having a reversible direction magnetization,

an intermediate layer,

and a second electrode,

device wherein the intermediate layer constitutes a first thermal barrier formed by a material having a thermal conductivity lower than 5W/m/°C.

13. (New) Device according to claim 12, wherein a second thermal barrier is formed by a layer arranged between the first electrode and the first layer magnetic.

14. (New) Device according to claim 12, wherein the material of the first and/or second thermal barriers has an electrical conductivity such that the electrical resistance of the thermal barrier is substantially lower than the electrical resistance of the tunnel barrier.

15. (New) Device according to claim 12, wherein the material of the first and/or second thermal barriers comprises at least one alloy containing at least one element chosen from

arsenic, antimony, bismuth, germanium, tin and lead and containing at least one element chosen from sulphur, selenium, tellurium, aluminium, gallium, indium and thallium.

16. (New) Device according to claim 12, wherein the material of the first and/or second thermal barriers comprises at least one alloy containing at least one element chosen from phosphorus, arsenic and antimony and containing at least one element chosen from iron, ruthenium, osmium, cobalt, rhodium, iridium and zinc.

17. (New) Device according to claim 16, wherein the material of the first and/or second thermal barriers comprises at least one element chosen from lanthanum, cerium, praseodymium, neodymium, samarium, europium, gadolinium, thulium, ytterbium, thorium and uranium.

18. (New) Device according to claim 12, wherein, the first thermal barrier being formed by an anti-ferromagnetic layer, the device comprises a magnetic decoupling layer arranged between the first thermal barrier and the second magnetic layer.

19. (New) Device according to claim 18, wherein the material of the magnetic decoupling layer is chosen from tantalum, chromium, vanadium, manganese and platinum.

20. (New) Device according to claim 12, wherein a third thermal barrier is formed by the tunnel barrier.

21. (New) Device according to claim 20, wherein the material of the tunnel barrier is chosen from silicon oxide, zirconium oxide and titanium oxide.

22. (New) Read/write method of a magnetic device according to claim 12, wherein

a write phase comprises flow of an electric current, through the tunnel junction, from the second magnetic layer to the first magnetic layer, so as to heat the second magnetic layer to a higher temperature than the blocking temperature of the magnetization of the second magnetic layer,

and a read phase comprises flow of an electric current, through the tunnel junction, from the first magnetic layer to the second magnetic layer.